2025

DRAFT Recommendations for the care of people under 40 years old living with type 2 diabetes in Scotland

20/5/25

Short life working group membership

Recommendations for the care of people under 40 years old living with type 2 diabetes in Scotland

The rising numbers of young people living with type 2 diabetes in Scotland is a significant concern (1). As of Spring 2025, 688 people under the age of 26 and 11,739 people aged 26 – 40 years were living with Type 2 diabetes in Scotland. This problem exists due to relatively recent changes in the food and social environment of people living with a genetic predisposition to type 2 diabetes. Unfortunately, younger age at onset of type 2 diabetes is associated with accelerated development of vascular complications and reduced life-span (2, 3). An enhanced approach to usual care for type 2 diabetes in adults is essential to attempt to limit the long-term sequalae in this younger population.

Summary of key recommendations

1	Remission interventions should be the first line treatment
2	Care providers must have skills in trauma-informed care
3	People aged under 30 years should be seen by specialist services
4	Goals of care will be person-centred
5	Females must be well-informed regarding pregnancy

Principles of care

Care must be person-centred and delivered in a compassionate manner which encourages a positive relationship between patient and care provider. Three main domains of care are suggested in order of importance – **empowerment** to look after oneself and receive care, **lifestyle** habit changes which could benefit the individual and **medication** – use of disease-modifying diabetes medications is likely to be necessary for most. For those living with family or friends a **whole household** approach to changes within the living environment is more effective than individual change.

ELM approach to type 2 diabetes in young people

Empowerment – higher prevalence of social and food insecurity leads to challenges in personal care; trauma-informed care should promote healthy self-care behaviours

Lifestyle - support access to locally available resources for healthy activity, eating and sleep habits along with stress management

Medication – early access to effective medication promoting weight loss and reducing cardiovascular risk

Clinical approach

Due to the complexity of some clinical presentations, it is recommended that **specialist services** should be available to lead in the care of all patients under the age of 30 years and may be involved in the management of people under the age of 40 years. The young-onset type 2 diabetes specialist service is likely to include a diabetologist, diabetes specialist nurse, dietitian with weight management experience and may include a clinical psychologist. The specialist service will have close links to paediatric diabetes specialist services and primary care diabetes care teams including adult weight management services (AWMS).

It is essential that an accurate diagnosis is made, type 1 diabetes is the most important alternative diagnosis. Primary care teams are encouraged to consider early identification and referral with consultation of SIGN Guidelines on prevention and remission of type 2 diabetes (4). Recommended assessment process/findings consistent with type 2 diabetes in people under the age of 40:

- Clinical features consistent with type 2 diabetes (raised BMI, hypertension, low HDL)
- Family history of type 2 diabetes
- Screen for commonly co-existent medical conditions: polycystic ovary syndrome (PCOS), obstructive sleep apnoea (OSA) (using age-appropriate tool), metabolic dysfunction-associated steatotic liver disease (MASLD), attention-deficit hyperactivity disorder (ADHD). Refer on via local pathways as appropriate.

If atypical presentation for type 2 diabetes:

- Check GAD, IA2 and ZnT8 antibodies (usually positive in type 1 diabetes)
- Genetic/familial – take family history and use MODY risk calculator if diagnosis age under 35 years (*note - not validated in non-Caucasian population*)
- Exclude causative medical conditions (Acromegaly, Cushing's)

People under the age of 40 years should receive usual diabetes care with the inclusion of the following treatment targets and measures. Once type 2 diabetes is confirmed, remission should be the first aim for all within the first 10 years of diagnosis.

TARGETS	**MEASURES**
10-15% Weight Loss	**Engagement (DNA rate)**
HbA1c <48 mmol/mol	**Receiving 9 processes of care***
BP <130/80 mmHg	**PAID score****

Enhancing services and training

- We recommend all staff are trained in trauma and using language to discuss obesity and excess weight, ideally a clinical psychologist will be part of the multi-disciplinary team and available for clinical input due to the high coexistence of mental health morbidity.
- Remission interventions must be accessible to people who chose this option.
- Sustainable healthy lifestyle habits should be discussed with a whole household approach most likely to be effective.
- Peer supporters or diabetes coaches who are closely linked to the individual's living environment are recommended.
- Education designed for younger age groups should be available. Digibete is currently available to most health boards in Scotland.
- The importance of metabolic health and impact on pregnancy outcomes must be highlighted to all care providers and should be a priority discussion point when delivering care to females.
- Managing cardiometabolic risk and associated health problems related to excess weight should be a priority for services.

Recommended	Desired
Timely access to remission interventions	
Trauma-training for all staff in specialist services (National Trauma Transformation Programme via TURAS)	Psychologist within MDT
Signposting to local lifestyle resources	Diabetes coach or peer support within specialist service
Age and ability-appropriate education materials including Digibete	
Age under 30 years old seen in specialist service	Age 31 – 40 years have access to MDT discussion where needed
Pre-pregnancy counselling for all women of childbearing age	Priority triage for those trying to conceive
9 processes of care received	Enhanced SCI diabetes monitoring (see below)
Screening for obstructive sleep apnoea, polycystic ovary syndrome, metabolic liver disease, attention deficit disorder	

Women of childbearing age

Type 2 diabetes has an adverse impact on pregnancy outcomes. For glucose lowering pre-conception and during pregnancy metformin and insulin are safe. Reliable contraception is recommended for all other medications. With GLP-1/GIP-RA a long-acting reversible contraceptive (LARC) is recommended due to the potential for delayed gastric emptying and reduced absorption of oral contraception. GLP-1-RA (and GLP-1/GIP-RA) should be stopped before trying to conceive (see BNF for latest guidance).

Pre-pregnancy counselling from specialist service should be available for all women with type 2 diabetes who are considering conceiving with the aim to:

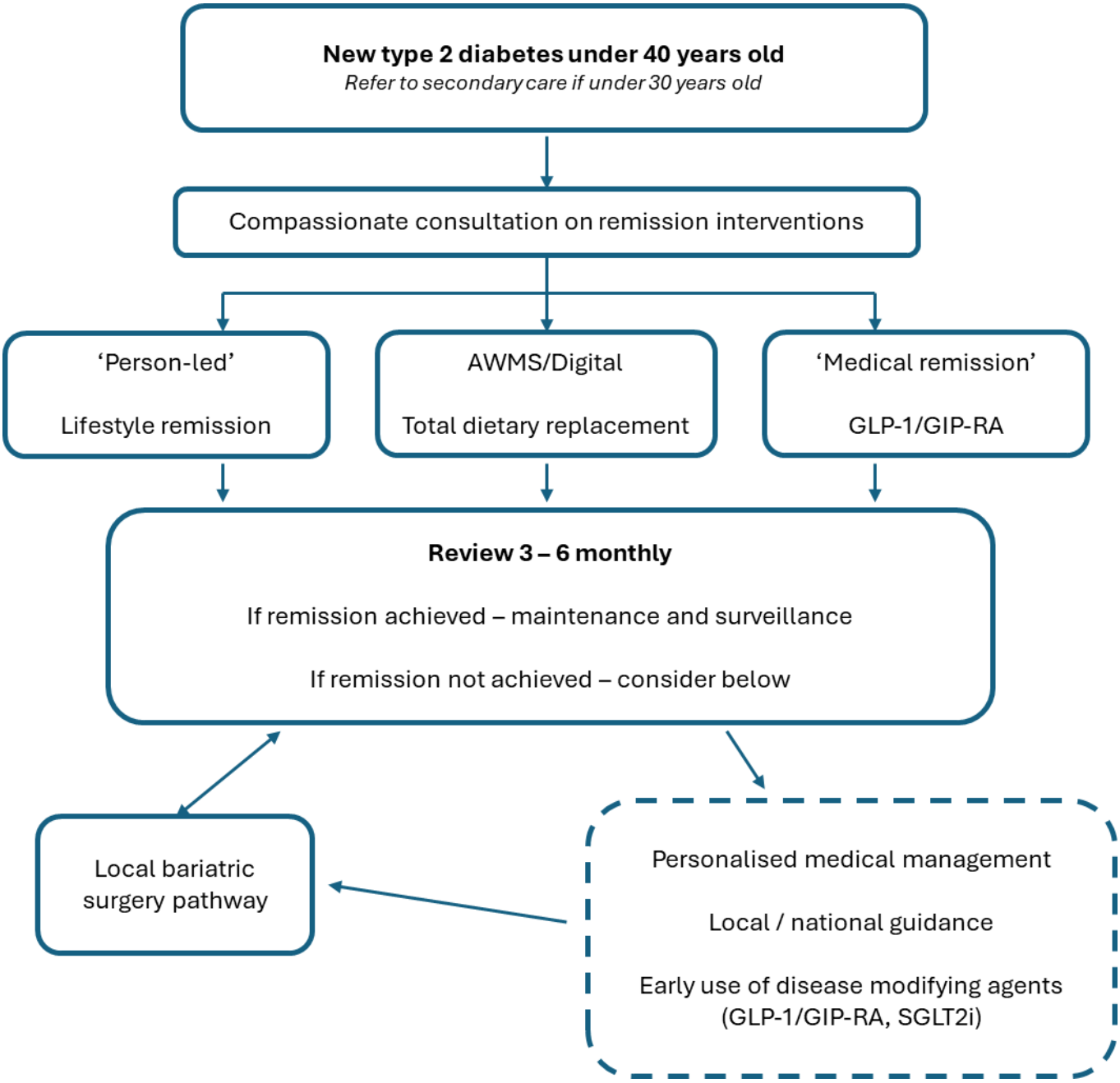
- ✓ Optimise HbA1c (<48mmol/mol), weight (ideally BMI <27kg/m^2) and BP
- ✓ Stop GLP-1-RA, SGLT2i, sulphonylurea, ACE inhibitor/angiotensin receptor blocker and statin, suitable alternative antihypertensives are available
- ✓ Start Folic Acid 5mg once daily for 3 months pre-conception and up to 12/40

Measuring progress

We recommend that SCI-diabetes is modified to allow tracking of outcomes for people under the age of 40 years with type 2 diabetes. An enhancement to the current data available from the SCI-diabetes dashboard appropriate for this group would include:

- **Remission achieved**
- **Remission maintained**
- **% weight change from diagnosis**
- **HbA1c < 48 mmol/mol**
- **Engagement with service (DNA rate)**
- **Measurement of distress (appendix 2)**

Pathway for compassionate remission of type 2 diabetes age <40 years



Appendix 1: 9 Process of Diabetes Care

1. Blood pressure annual check
2. Urine albumin:creatinine annual check
3. Smoking status discussion annually
4. HbA1c annual check
5. Serum creatinine annual check
6. Serum cholesterol annual check
7. Weight and BMI annual check
8. Foot risk screening (every 2 years whilst low risk)
9. Retinopathy screening (every 2 years whilst low risk)

Appendix 2. PAID scale

The Problem Areas In Diabetes (PAID) scale is one of several tools available to assess the emotional burden of living with diabetes (5). Other tools include the Diabetes Distress Scale (DSS).

The PAID scale consists of 20 questions which are scored from 0 – 4. A total score of 40 or above reflects severe distress. A tool like this can provide insight into the impact of diabetes on a person's life and allow practitioners to support self-care and awareness to hopefully reduce distress levels.

References

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2. TODAY Study Group, TODAY Study Group; Long-term Outcomes Among Young Adults With Type 2 Diabetes Based on Durability of Glycemic Control: Results From the TODAY Cohort Study. Diabetes Care 1 November 2022; 45 (11): 2689–2697.
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4. Prevention and remission of type 2 diabetes. A national clinical guideline. SIGN 2024. 20240417-type-2-diabetes-prevention-gl-consultation-draft-v10.pdf
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